## REMARKS

This is in response to the Office Action of February 23, 2005. Claims 1-32 were rejected. Claims 1, 12, 14, 28, 29, 30, and 31 were amended. Claims 1-32 are pending.

Claim 14 was objected to. Applicant has made the correction requested by the Examiner.

Applicant has amended independent claims 1, 12, 28, 29, 30, and 31 to have a limitation similar to independent claim 22 that the test of overclocking parameters is performed automatically to determine the overclocking parameters. Support for this amendment is found in original claim 22 and elsewhere in Applicant's specification, such as in paragraph [0027].

Applicant's claimed invention automatically performs a test of overclocking parameters and automatically determines overclocking parameters. A problem solved by Applicant's claimed invention is described in paragraphs [0003]-[0004] of Applicant's specification. In the prior art some graphics systems permitted an overclocking mode to be manually selected. The user would then have to use a separate benchmark software program to evaluate performance by running a benchmark program. Thus, an end user could, in principle, test a matrix of overclocking parameters by repeating a process in which the end user incremented the overclocking rate and then ran a separate benchmark program to test the change in processing speed. However this incremental "trial and error" process had many drawbacks. First, it was time consuming and difficult for ordinary consumers to implement. Second, it required that the consumer have a separate benchmark software program to monitor processing speed and also be observant for indications of abnormal behavior Third, the user faced several problems if they overclocked too aggressively. Excessive overclocking shortens the life of the graphics system. Additionally, manually setting overclocking parameters may result in a glitch (one type of which is commonly known as "hanging" the chip) at high overclocking levels, which requires the consumer to reboot the graphics system.

The Examiner based all of his rejections upon the Bigjakkstaffa article "Overclocking a Video Card." Claims 1-6, 10-17, and 30-32 were rejected under 35 U.S.C. 102(a) as being

anticipated by Bigjakkstaffa. Claims 7, 9, and 18 were rejected over Bigjakkstaffa in light of the Gasior article. Claim 8 was rejected as being unpatentable over Bigjakkstaffa and Gasior in view of the Catenary Systems article. Claim 19 was rejected as being unpatentable over Bigjakkstaffa in view of Catenary Systems. Claim 20 was rejected as being unpatentable over Bigjakkstaffa in view of Fung, U.S. Publication No. US 2002/0062454. Claims 22-27 were rejected as being unpatentable over Bigjakkstaffa in view of Kao (U.S. Pat. No. 6,622,254) in view of Gasior. Claims 28-29 were rejected over Bigjakkastaffa in view of Kao. Claim 21 was rejected as being unpatentable over Bigjakkstaffa in view of Tran, U.S. Pat. No. 6,567,868.

Applicant respectfully traverses the rejections but has amended the claims to emphasize the inherent features that the testing of overclocking parameters is performed automatically and that the overclocking parameters are automatically determined. Applicant respectfully submits that Bigjakkstaffa is not an automated process that performs automatic testing and determination of overclocking parameters by one entity such that Bigjakkstaffa fails to teach or suggest several limitations of Applicant's claimed inventions.

Bigjakkstaffa requires an end user to switch back and forth between two separate utilities in order to increment overclocking parameters. Bigjakkstaffa teaches the end user to use a third party utility to overclock a card and recommends the Rivatuner. (See, e.g., Bigjakkstaffa, section "Page 1/3," p. 1, "To begin with you'll need a third-party utility with which to overclock the card. . . . My personal preference is the excellent Rivatuner."). After the end user has selected a set of overclocking parameters with the Rivatuner utility, Bigjakkstaffa recommends that the end user then test the new clock parameters using a separate benchmark program, such as the 3dmark 2001 utility, or by running a 3D game. (See, e.g., Bigjakkstaffa, section "Page 2/3," p. 3, "Once you have saved your settings it's time to test if your overclock is fully stable. To do this I'd recommend running a quick bench, say a single run of 3dmark 2001 or play a quick five-minute stint of a 3D accelerated game").

Note that Bigjakkstaffa emphasizes that the overclocking process it describes is a time consuming, laborious process of trial and error. "So having increased incrementally and benched, and increased and benched ***for quite some time now***, you should reach a point whereby

you begin to notice some unusual graphical glitches in your games and benchmarks." (See, e.g., Bigjakkstaffa, section "Page 3/3," p. 1, emphasis added).

Bigjakkstaffa teaches that the end user must be careful to observe signs of instability in the operation of the graphics system. In particular, Bigjakkstaffa warns users to be observant for graphical glitches as they overclock their system. (See, e.g., Bigjakkstaffa, section "Page 3/3," p. 1, "So having increased incrementally and benched . . . ***you should begin to notice some unusual graphical glitches*** in your games and benchmarks. For example, textures may flicker a lot or colored dots may appear. My friends, you have reached the ceiling for your overclock." (emphasis added to highlight that the end user must observe graphical glitches.")

Note that Bigjakkstaffa sternly warns users about the dangers of excessive overclocking. In particular, Bigjakkstaffa warns that if a user incrementally increases overclocking parameters that they may destroy their graphics processor. (See, e.g., Bigjakkstaffa Page 3/3 "The core of the graphics card does not take as kindly to overclocking as the memory does, as such it is usually unwise to raise the core clock by a great deal, as its more likely to go boom, and then its goodnight Vienna I'm afraid.")

Independent claims 1, 12, 22, 28, 29, 30, and 31 include limitations corresponding to automatically applying a test of overclocking parameters and automatically determining one or more overclocking parameters[1]. Bigjakkstaffa teaches away from such an apparatus, system, and

[1] See, e.g., claim 1, "automatically applying a stress test" and "automatically determining a safe set of overclocking parameters"; claim 12, ""automatically applying a stress test: and "automatically determining a maximum clock rate"; claim 22, "configured to automatically test overclocking parameters and determine maximum safe overclocking parameters"; claim 28, "automatically apply a stress test" and "automatically selecting overclocking parameters"; claim 29, "automatically test diferent overclocking parameters, set overclocking parameters, and return overclocking parameters"; claim 30, "automatically performing a graphical stress test," and "automatically determine safe overclocking parameters"; claim 31, "automatically performing a graphical stress test" and "automatically determining safe overclocking parameters."

method. As previously described, Bigjakkstaffa teaches that an end user must switch back and forth between two different utilities, with the end user carefully observing for glitches or other problems that may occur in the benchmark program after the user increments the clock rate using the overclocking utility. Applicant thus respectfully submits that Bigjakkstaffa does not teach or suggest an apparatus, system, or method for automatically applying a test of overclocking parameters and automatically determining one or more overclocking parameters.

In light of the remarks above, Applicant respectfully submits that the pending claims are in condition for allowance. The dependent claims are allowable for at least the same reasons and also include additional limitations.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is now in condition for allowance. The Examiner is invited to contact the undersigned if there are any residual issues that can be resolved through a telephone call.

The Commissioner is hereby authorized to charge any appropriate fees to Deposit Account No. 03-3117.

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Respectfully submitted,
COOLEY GODWARD LLP

By: _____
Edward Van Gieson
Reg. No. 44,386

COOLEY GODWARD LLP
ATTN: Patent Group
Five Palo Alto Square
3000 El Camino Real
Palo Alto, CA 94306-2155
Tel: (650) 843-5000
Fax: (650) 857-0663